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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,024	08/24/2005	Holger Fleischhauer	35717	6974

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HOVEY WILLIAMS LLP  
2405 GRAND BLVD., SUITE 400  
KANSAS CITY, MO 64108

EXAMINER
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NGUYEN, PHU HOANG

ART UNIT	PAPER NUMBER
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1731

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05/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/520,024

Applicant(s)

FLEISCHHAUER ET AL.

Examiner

Phu H. Nguyen

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1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/30/2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 3, 7 has the phrase "mechanically compressed" that was not disclosed in the Specification. For the purpose of examination, the examiner will assume "mechanically compressed" means "compressed".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziehn (U.S Patent No. 4577646) in view of Ashburn (U.S Patent No. 3753440).

Regarding claim 1, Ziehn discloses a process for enhancing the filling capacity of tobacco material where in the material has an initial moisture of 10% to 30% by weight water (column 5, line 25-29), said process comprising the steps of: treating the material within a pressure vessel with a treatment gas containing at least one of the following: nitrogen gas, argon gas or a mixture thereof at pressure up to 1000 bar (overlapping the claimed "400 to 1000 bar" recites in the instant claim 1), conducting a decompression step and a heat treatment step thereafter wherein the treatment gas supply and/or the decompression step are carried out in such a way that the discharged material is

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supplied to a subsequent heat treatment (column 1, line 46-57). In example 1, Ziehn discloses 30 kg of finished tobacco mixture are treated in a 200 liter pressure vessel that has a filling density of  $0.15\text{kg/dm}^3$  which is less than  $0.2\text{kg/dm}^3$ . However, Ziehn does not expressly disclose that the pressure vessel can only be used to treat up to 30 kg. Furthermore, Ashburn discloses a tobacco expansion process where the filling capacity of the tobacco prior to treatment was 443 ml/100g corresponding to  $.23\text{kg/dm}^3$  (column 7, line 66 to column 8 line 4). Therefore, it would have been obvious to one of ordinary skill in the art to use the pressure vessel to treat more tobacco material with different initial filling capacity.

Regarding claim 3, Ziehn discloses the material is compressed before, during or after the pressure vessel is filled (column 6, line 18-26).

Regarding claim 4, Ziehn discloses the dependence of the fillability improvement FCI in % on the inlet temperature of the tobacco for the heat treatment (fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art to heat the material before or during compression to elevate the inlet temperature of the material that subsequently improves FCI.

Claims 2, 5-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziehn (U.S Patent No. 4577646) and Ashburn (U.S Patent No. 3753440) as applied to claim 1 and 3-4 above, further in view of Ziehn (U.S Patent No. 4289148). The combination of Ziehn (U.S Patent No. 4577646) and Ashburn does not expressly disclose the step of treating the material presents a pressure time being at least 300 sec.

Regarding claim 2, Ziehn (U.S Patent No. 4289148) discloses in Table I that the increase of filling capacity (62% to 65%) as the action time (corresponding to the claimed "pressure time" recites in the instant claim 2) increases (1 min to 10 min) overlapping the lower limit (300 sec) of the instant claim 2. Although the increase is the difference (3%) between 62% and 65% might be considered non-substantial, it is comparable to the increment of filling capacity presents by the instant applicant of 1% (the difference of 73% and 74% on Table 4). Therefore, it would have been obvious to one of ordinary skill in the art to increase the pressure time to increase the filling capacity.

Regarding claim 7, Ziehn (U.S Patent No. 4577646) discloses the material is compressed before, during or after the pressure vessel is filled (column 6, line 18-26).

Regarding claim 8, Ziehn (U.S Patent No. 4289148) discloses heat exchanger (4, fig. 1) where the treatment gas can be brought to the desired temperature to heat up the tobacco during compression.

Regarding claims 5, 9 and 11, Ziehn (U.S Patent No. 4289148) discloses the pressure vessel can be rapidly pressurized to 800 bar in 60 sec (Table I). Therefore, Ziehn envisages the change in process variables that involves the vessel being brought up to a desired pressure during the first 60 sec.

Regarding claims 6, 10 and 12-17, Ziehn (U.S Patent No. 4289148) further discloses nitrogen storage tank (15, fig. 1) can be used to compensate pressure different by topping up with nitrogen (column 3, line 3-5). Therefore, Ziehn envisages the performance of renewed pressurization to compensate for pressure loss.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cho et al. (U.S Patent No. 5649552) discloses thermodynamic paths during pressurization of the pressure vessel in a method of expansion of tobacco includes a path where the pressure of the system is hold for a desired length of time then the vessel is rapidly depressurized to atmospheric pressure resulting in a post vent temperature of about -5 degree F to -10 degree F (column 14, line 28-33 and fig. 1).


Cho et al. (U.S Patent No. 5649552) also discloses that it has been discovered that tobacco contact time with carbon dioxide gas, i.e., the length of time that the tobacco must be maintained in contact with the carbon dioxide gas in order to absorb a desired amount of carbon dioxide, is influenced strongly by the tobacco OV content and the impregnation pressure used. Tobacco with a higher initial OV content requires less contact time at a given pressure than tobacco ith a lower initial OV content in order to achieve a comparable degree of impregnation particularly at lower pressures. At higher impregnation pressures, the effect of tobacco OV on contact time with the carbon dioxide gas is reduced (column 15, line 2-13).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu H. Nguyen whose telephone number is 571-272-5931. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.N 5/16/2007

  
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